

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

We claim:

1. (currently amended): A method of occluding the ovarian pathway of a female body, said method comprising the steps of:

 applying a heating element in the form of a catheter-mounted RF electrode array to a target segment of the pathway, and operating the heating element to heat the target segment in the pathway;

 limiting the heating of the target segment by applying power of less than 0.1 to 5 watts to the heating element for a period of at least about 5 seconds;

 installing a plug into the target segment of the pathway, wherein the plug comprises a foam plug having a pore size selected to encourage at least one of vascularized tissue ingrowth and vascularized capsule growth.

2. (previously presented): The method of claim 1, wherein the heating element is in the form of the catheter-mounted RF electrode array adapted for application to the ovarian pathway.

3. (previously presented): The method of claim 1, wherein operating the heating element further comprises applying RF energy to the target segment through the catheter-mounted RF electrode array.

4. (previously presented): The method of claim 1, wherein operating the heating element further comprises applying bi-polar RF energy to the target segment through the catheter-mounted RF electrode array.

5. – 8. (canceled).

9. (currently amended): The method of claim 1 additionally comprising the step of providing the plug in the form of a reticulated foam plug having pores with pore sizes in the range of 40 to 200 microns to encourage vascularized tissue ingrowth in the foam plug.

10. (currently amended): The method of claim 1 additionally comprising the step of providing the plug in the form of a reticulated foam plug having pores with pore sizes in the range of 1 to 20 microns to encourage vascularized capsule growth around the plug.

11. (original): The method of claim 9 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of 20–100 Shore A.

12. (original): The method of claim 9 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of about 60 Shore A.

13. (original): The method of claim 9 additionally comprising the step of providing the foam plug in the form of an ePTFE plug.

14. (original): The method of claim 9 additionally comprising the step of providing the foam plug in the form of an acrylic copolymer plug.

15. (original): The method of claim 10 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of 20–100 Shore A.

16. (original): The method of claim 10 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of about 60 Shore A.

17. (original): The method of claim 10 additionally comprising the step of providing the foam plug in the form of an ePTFE plug.

18. (original): The method of claim 10 additionally comprising the step of providing the foam plug in the form of an acrylic copolymer plug.

19. (currently amended): A method of occluding the ovarian pathway of a female body, wherein the ovarian pathway is lined by an epithelial layer on the inner surface of the ovarian pathway, and wherein the ovarian pathway is further characterized by a lamina propria layer surrounding the epithelial layer, a circular muscle layer surrounding the lamina propria layer and a longitudinal muscle layer surrounding the circular muscle layer, said method comprising the steps of:

applying a wounding element in the form of a catheter-mounted RF electrode array and operating the wounding element to cause a wound in the segment of the pathway that necroses the epithelial layer;

limiting the outward extent of the wound to the circular muscle layer by limiting the heating of the target segment by applying power of 0.1 to 5 watts to the catheter-mounted RF electrode array ~~heating element~~ for a period of at least about 5 seconds;

installing a foam plug comprising a reticulated foam into the wounded segment of the pathway, wherein the foam plug has a pore size selected to encourage at least one of vascularized tissue ingrowth and vascularized capsule growth; and

allowing the wounded segment of the pathway to heal with the foam plug installed.

20. (previously presented): The method of claim 19, wherein the catheter-mounted RF electrode array is adapted for application to the ovarian pathway.

21. (previously presented): The method of claim 19, wherein operating the wounding element further comprises applying RF energy to the target segment through the catheter-mounted RF electrode array.

22. (previously presented): The method of claim 19, wherein operating the wounding element further comprises applying bi-polar RF energy to the catheter-mounted RF electrode array.

23. – 26. (canceled).

27. (currently amended): The method of claim 19 additionally comprising the step of providing the plug in the form of a reticulated foam plug having pores with pore sizes in the range of 40 to 200 microns to encourage vascularized tissue ingrowth into the foam plug.

28. (currently amended): The method of claim 19 additionally comprising the step of providing the plug in the form of a reticulated foam plug having pores with pore sizes in the range of 1 to 20 microns to encourage vascularized tissue capsule growth around the foam plug.

29. (original): The method of claim 27 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of 20-100 Shore A.

30. (original): The method of claim 27 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of about 60 Shore A.

31. (original): The method of claim 27 additionally comprising the step of providing the foam plug in the form of an ePTFE plug.

32. (original): The method of claim 27 additionally comprising the step of providing the foam plug in the form of an acrylic copolymer plug.

33. (original): The method of claim 28 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of 20-100 Shore A.

34. (original): The method of claim 28 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of about 60 Shore A.

35. (original): The method of claim 28 additionally comprising the step of providing the foam plug in the form of an ePTFE plug.

36. (original): The method of claim 28 additionally comprising the step of providing the foam plug in the form of an acrylic copolymer plug.

37. (currently amended): A method of occluding the ovarian pathway of a female body, the ovarian pathway being characterized by an epithelial layer lining the inside of the ovarian pathway, a lamina propria layer surrounding the epithelial layer, a circular muscle layer surrounding the lamina propria layer and a longitudinal muscle layer surrounding the circular muscle layer, said method comprising the steps of:

applying a heating element in the form of a catheter-mounted RF electrode array to a target segment of the pathway, and operating the heating element to heat the target segment in the pathway;

limiting the heating of the target segment to avoid wounding the longitudinal layer by limiting the heating of the target segment by applying power of 0.1 to 5 watts to the heating element for a period of at least about 5 seconds;

installing a plug into the target segment of the pathway, wherein the plug comprises a foam plug having a pore size selected to encourage at least one of vascularized tissue ingrowth and vascularized capsule growth.

38. (previously presented): The method of claim 37, wherein the heating element is in the form of the catheter-mounted RF electrode array adapted for application to the ovarian pathway.

39. (previously presented): The method of claim 37, wherein operating the heating element further comprises applying RF energy to the target segment through the catheter-mounted RF

electrode array.

40. (previously presented): The method of claim 37 wherein operating the heating element further comprises applying bi-polar RF energy to the target segment through the catheter-mounted RF electrode array.

41. - 44. (canceled).

45. (currently amended): The method of claim 37 additionally comprising the step of providing the plug in the form of a reticulated foam plug having pores with pore sizes in the range of 40 to 200 microns to allow vascularized tissue ingrowth into the foam plug.

46. (currently amended): The method of claim 37 additionally comprising the step of providing the plug in the form of a reticulated foam plug having pores with pore sizes in the range of 1 to 20 microns to allow vascularized capsule growth around the foam plug.

47. (original): The method of claim 45 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of 20-100 Shore A.

48. (original): The method of claim 45 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of about 60 Shore A.

49. (original): The method of claim 45 additionally comprising the step of providing the foam plug in the form of an ePTFE plug.

50. (original): The method of claim 45 additionally comprising the step of providing the foam plug in the form of an acrylic copolymer plug.

51. (original): The method of claim 46 additionally comprising the step of providing the foam

plug in the form of silicone foam having a durometer value of 20-100 Shore A.

52. (original): The method of claim 46 additionally comprising the step of providing the foam plug in the form of silicone foam having a durometer value of about 60 Shore A.

53. (original): The method of claim 46 additionally comprising the step of providing the foam plug in the form of an ePTFE plug.

54. (original): The method of claim 46 additionally comprising the step of providing the foam plug in the form of an acrylic copolymer plug.